Hypothesis Disconfirmation: Improving Mock-Juror Sensitivity to Confession Evidence

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Statement of Sources

I declare that this report is my own original work and that contribution of others have duly acknowledged.

Signed: _____ Date: _____

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Table of Contents

List of Tables

List of Figures

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Abstract

The present study investigated the extent to which mock-jurors are able to recognise factual inconsistencies in confession evidence. To assist this, a hypothesis disconfirmation intervention was trialled, as a method of improving sensitivity, and reducing judgements of guilt when a confession is unreliable (Brewer, Keast & Rishworth, 2002). Two hundred and eighty-three participants (197 female, 4 other; aged 18-78 years, $M = 32.9$, $SD = 13.55$) were randomly allocated to one of six conditions on the basis of variation in confession consistency, and the presence or absence of the hypothesis disconfirmation. Content of confessions varied in consistency with police facts of the case across three conditions (consistent, small inconsistencies, large inconsistencies). After viewing a police report and confession statement, the hypothesis disconfirmation intervention required participants to generate alternative explanations for the suspect confessing, without having committed the crime; prior to provision of verdict. Results supported an error sensitivity perspective (cf. insensitivity perspective), which purports that jurors are better at recognising inconsistencies than previously acknowledged (Henderson & Levett, 2016; Palmer, Button, Barnett & Brewer, 2016; Woesetehoff & Meissner, 2016). Evidence for the hypothesis disconfirmation was not sufficient to warrant a convincing interpretation, however patterns of results were promising. Implications for theory, research and practice are discussed.

Confession evidence is one of the most potent forms of evidence in obtaining a conviction, and it is therefore critical that confessions presented in court are objectively reliable, or, in the case that they lack reliability but remain admissible, jury members are adequately equipped to recognise unreliable confessions (Appleby, Hasel & Kassin, 2013; Kassin, 2008, 2014). The suggestion that someone might confess to a crime they did not commit is counterintuitive in the context of self-incrimination, and based on a common-sense understanding of human behaviour, it would seem reasonable to believe that false confessions do not occur, in reality (Kassin, Drizin, Grisso, Gudjonsson, Leo & Redlich, 2010; Scott-Hayward, 2007). In contradiction to this presumption however, a number of instances of false confessions have been recorded, posing an important issue for the criminal justice system (Kassin & Sukel, 1997; Kassin, 2012). Problematically, an assumption underlying this common-sense notion is that a confession inherently indicates guilt; an innocent person would not confess, therefore someone who has confessed, is surely guilty (Kassin, 2008; 2014). In combination, this disbelief in the likelihood of an innocent person confessing, and an over-belief in the strength of confession evidence generally, makes confessions critically influential in the judicial context, and an important area of consideration for both legal scholars and researchers (Garrett, 2010). The focus of the present research, is to test juror sensitivity to inconsistent confession evidence.

The circumstances in which false confessions occur warrants consideration, but equally, the consequences of a false confession once presented at trial, also requires significant attention (Kassin, 2012). The risk of conviction is increased when a suspect confesses, due to the strength of confession evidence in persuading investigators and jurors of suspect guilt (Kassin, 1997; Kassin, 2012). The fact that a

confession is the only type of evidence which can be used in isolation to gain a conviction, without additional supporting evidence, makes confessions particularly compelling (Malloy, Shulman & Cauffman, 2014). According to the Innocence Project (2017a), 29% of DNA exonerations in the United States (instances where forensic testing of DNA evidence has led to an overturned conviction; Innocence project, 2017a), include instances of a false confession. This statistic indicates the known rate of false confessions, and highlights the associated risk of prosecution and wrongful imprisonment (Innocence Project, 2017a). As Leo (2009) points out, this percentage of recorded cases is likely only the tip of the iceberg, given an absence of available DNA evidence, in most contested cases.

False confessions are not only problematic in that they lead to the wrongful imprisonment of an innocent person, but in the case that a conviction is made, they also result the perpetrator remaining free, posing a potential risk to society (Kavanaugh, 2016). In combatting false confessions, there are two crucial issues that require examination. The first issue relates to the occurrence of false confessions, and the need for strategies to reduce them (Leo, 2009). Research addressing this issue has established suspect vulnerabilities and police interrogation tactics as stable risk factors associated with false confessions, resulting in safeguards such as the implementation of mandatory videotaping of police interviews (Garrett, 2010; Kassin, 2014). The second issue relates to how false confessions are processed in court. Assuming that safeguards will not eliminate their occurrence entirely, there is a requirement for the implementation of measures that will ensure decision-makers in the criminal justice system (investigators, jurors, and judges), are adequately equipped to process confession evidence in a critical manner (Henkel, et al., 2008; Kassin, 2012). Evidenced methods of improving juror processing of false

confessions however, are somewhat lacking, and it is within this paradigm that the current research is situated. Previous research, highlights that while factual errors in witness evidence undermines the credibility of witness testimony, from a jurors' perspective, the same does not seem to occur in the context of confession evidence (Malloy & Lamb, 2010; Tenney, MacCoun, Spellman & Hastie, 2007).

Increasing jurors' ability to recognise false confessions requires acknowledgement of the cognitive biases inherent in the jury decision making process, and assessment of potential methods to reduce them (Ask & Granhag, 2005). In the present study, utilisation of a hypothesis disconfirmation technique is proposed to limit the impact cognitive biases have on jury decision making processes, and increase the critical evaluation of confession evidence (Brewer, Keast, & Rishworth, 2002). The aim with this intervention is to improve mock jurors' recognition of factors that may bring the reliability of a confession into question, such as factual inconsistencies, and make them more discerning in the verdict they are willing to return, based on the evidence. Before exploring the cognitive biases relevant to juror perceptions of confession evidence, and how these might be attenuated, there is a need to discuss the occurrence of false confessions more generally. To facilitate this discussion, a number of important areas will be addressed: different types of false confessions, risk factors associated with false confessions, and how false confessions increase the risk of wrongful conviction.

Three Types of False Confessions

Three types of false confessions exist in the literature; voluntary, coerced-compliant, and coerced-internalised (Kassin & Wrightsman, 1985). Voluntary false confessions, as the name suggests, are those which are offered freely by an individual, in the absence of police pressure (Leo, 2009). A person may confess

voluntarily for one of two likely reasons: either they are protecting the real perpetrator, or they are hoping to gain notoriety through confessing to a high profile crime (Leo, 2009). An example of the latter occurred when Charles Lindbergh's infant was kidnapped in 1932, and over 200 men came forward to confess to the crime (Kassin, 2014; Kassin et al., 2010). These types of false confessions are most easily recognised by investigators as unreliable, and typically do not make it to trial, as they lack important detail (Kassin, 2014; Leo, 2009). In these instances, confessors are usually only be able to provide details already available in the public domain, while failing to present any new crime specific information (Kassin et al., 2010; Leo, 2009).

Coerced-compliant confessions are the most common type of false confession, and occur when a suspect confesses only to comply with police demands (Kassin, 2012; Leo, 2009). Such compliance is given in the hope that it will bring some benefit for the suspect, such as the termination of an interrogation or leniency in sentencing – benefits that outweigh the cost of continued denial (Leo 2009). As the suspect confesses with knowledge they are truly innocent, coerced-compliant confessions are typically recanted shortly after interrogation (Leo, 2009). An infamous case of a coerced-compliant confession occurred when five young men, known as The Central Park Five, admitted to the rape and murder of a women in Central Park in 1989, stating in a later recantation that they thought they would be free to go if they confessed (Kassin et al., 2010). Regardless of their recantation, the five men spent between 6 and 13 years in prison, and were only exonerated when the true perpetrator came forward in 2002 (Kassin et al., 2010). Unfortunately, this shows that even recanted confessions may be admissible in court, and due to the

potency of confession evidence, they remain powerful in swaying jurors towards guilt (Leo, 2009; Kassin & Sukel, 1997).

Coerced-internalised confessions are rare, as they represent a situation in which the suspect has come to believe in their own guilt, even though they are innocent (Kassin, 2014). The most influential factor in leading to internalisation of guilt, is the presentation of false evidence, such as polygraph results, DNA evidence, or witness testimonies, which all imply suspect guilt (Kassin & Gudjonsson, 2004; Kassin & Kiechel, 1996). In this circumstance, given the supposed wealth of evidence against them, a suspect may begin questioning their innocence, which in combination with exhaustion and confusion due to aggressive interrogation tactics, can lead them to believe they committed the crime (Kassin & Gudjonsson, 2004). In 1998, after a lengthy investigation, and the reported existence of physical evidence linking him to the crime, Michael Crowe internalised blame for his sister's murder, and subsequently provided a detailed confession. He later recanted, and was not convicted of the crime, but this example demonstrates how coercive methods of interrogation can lead to internalised confessions (Kassin et al., 2010).

Risk Factors Associated with False Confessions

There are a range of factors that increase the likelihood of a false confession, with some pertaining to the nature of the interrogation, while others relate to the specific vulnerabilities of the suspect (Kassin, 2014). Those relevant to the interrogation include the presence of coercion, duration of interrogation, presentation of false evidence, social isolation, threats of violence or harsh sentencing, promises of leniency for cooperation, and deprivation of necessary resources such as food, water and sleep (Innocence Project, 2017b; Leo, 2009; Kassin, 2014). Such techniques become instrumental in pressuring a suspect towards complying with

police demands, with the impetus being that the suspect is motivated to escape an adverse interrogation, even if it means confessing to a crime they did not commit (Garrett, 2010; Kassin et al., 2010).

There are important risk factors that increase a suspects vulnerability to manipulation during interrogation (Drizin & Leo, 2004; Kassin, 2014 Leo, 2009). Those at the greatest risk of confessing, in response to police-coercion, are juveniles, individuals with diminished capacity or intellectual impairment, and those with mental illnesses (Goldstein, Condie, Kalbeitzer, Osman & Geier, 2003; Kassin et al., 2010). This vulnerability stems from a lack of understanding of the law, misjudgements of consequences, and underestimation of the protective importance of safeguards such as Miranda rights (United States right to silence and attorney; United States Courts, 2016): highlighted by the majority of suspects who falsely confessed, having waived theses rights (Goldstein et al., 2003; Kassin, 2014). Vulnerable suspects engage in a maladaptive decision-making process characterised by impulsivity, immediate gratification and miscalculation of future consequences, known as the "immaturity of judgement", (Owen-Kostelnik, Reppucci, & Meyer, 2006). Overconfidence in the phenomenology of innocence, as those convicted on the basis of a false confession, report a miscalculation of consequences associated with admission, believing that safeguards in the justice system, would prove their inherent innocence (Kassin, 2008; Kassin et al., 2010).

Increased Risk of Wrongful Conviction

False confessions increase the risk of wrongful conviction in three key ways. First, and most obviously, a confession is self-incrimination and is the strongest piece of evidence contradicting innocence (Garrett, 2010). Second, the presence of a confession taints other pieces of evidence (Kassin, 2014). For investigators, a

confession typically signifies ‘case closed’, which means the search for additional evidence (potentially exculpatory) is discontinued (Kassin, 2012). Even in the case that exculpatory evidence is at hand, a confession may prevent this from being presented in court (Kassin, 2012). In addition to this, research has shown that experts and mock-jurors who initially provide a not-guilty verdict on the basis of available evidence, have gone on to change their verdicts to guilty when a confession is later presented (Kassin, 2014; Kukucka & Kassin, 2014). Finally, people are insufficiently critical in their evaluation of confession evidence (Malloy & Lamb, 2010). Understanding this lack of criticality, requires contemplation of the psychological processes of the jury.

In comparison to other types of evidence (eye witness testimony and character testimony), jurors assign a greater weight to confession evidence (Kassin & Neumann, 1997). This effect is so strong, that in the circumstance in which a judge directs jurors to discount a confession, based on its unreliable content, higher rates of conviction are maintained, compared to when there is no confession at all (Kassin & Neumann, 1997; Kassin & Sukel, 1997; Levett, Danielsen, Bull Kovera, & Cutler, 2005). This finding is maintained even when jurors assert that they heeded judicial instruction and discounted the confession, reporting it had no bearing on their final verdict (Kassin & Neumann, 1997; Kassin & Sukel, 1997). This indicates that when confession evidence is present, even if it is deemed unreliable, it prompts inherent bias towards guilt (Kassin, 2012).

Competing Perspectives on Juror Sensitivity to Inconsistencies

Often in false confessions there are notable inconsistencies between police facts and the content of a confession. (Palmer, Button, Barnett, & Brewer, 2016). For example, in the case of Earl Washington who was convicted of rape and murder in

Virginia (1984), there were multiple inconsistencies between the information he provided and the known facts of the case (Innocence Project, 2017c). Most glaringly, was the inconsistency between Washington's confession of having stabbed the victim 2-3 times, and the reality that the victim sustained 38 stab wounds (Innocence Project, 2017c). This confession was the main piece of evidence presented against Washington at trial, and a jury used it to convict him of rape and murder, for which he received the death sentence (Innocence Project, 2017c). Washington was imprisoned for 16 years, and came within 9 days of execution, before being exonerated in 2000. This is only one of numerous cases, where despite errors, jurors have been insufficiently sensitive to inconsistencies between facts of the case and a suspect's confession (Kassin et al., 2010). According to research, insensitivity to inconsistencies on behalf of jurors is the result of strong cognitive biases, that override the opportunity for critical, objective evaluation of confession evidence (Kassin, 2012).

In line with this, the traditional understanding of juror processing of confession evidence constitutes an error insensitivity perspective (Kassin et al., 2010; Kassin & Sukel, 1997; Malloy & Lamb, 2010), which purports that the influence of cognitive biases is robust, consistently leading jurors to be unaware of, or ignore inconsistencies in confession evidence. More recent research however, has challenged this perspective, with findings that suggest jurors may be less prone to bias and more sensitive to inconsistencies in confession evidence than was previously thought - supporting an error sensitivity perspective (Palmer et al., 2016; Henderson & Levett, 2016; Woestehoff & Meissner, 2016). This variation in findings highlights the need for further research on the influence of cognitive biases on jurors perceptions of confession evidence.

Moderating Sensitivity

A potential moderating factor that could impact juror sensitivity to inconsistencies, is individual differences in the extent to which jurors believe coercive interrogation is an appropriate police tactic, and conversely, whether or not they support the idea that someone could be coerced into falsely confessing (Clark, Boccacinni, & Turner, 2010). If a juror believes coercive interrogation tactics are appropriate, they likely do not believe that such tactics could lead an innocent person to confess, and thus are less likely to view inconsistencies as a reason to question a confession (Clark et al., 2010). Opposingly, those who support the idea that an innocent person could be coerced into confessing, will likely recognise inconsistencies as a potential sign of coercion, and more easily accept that a false confession may have occurred. To assess these attitudes, Clark et al., (2010), developed the Attitudes Towards Coerced Confessions scale (ATCC), which assesses attitudes towards coerced confessions on two subscales; The Coercive Interrogation subscale, which measures support for the use of coercive interrogation tactics (e.g. presentation of false incriminating evidence, offers of leniency), and the Coerced Confessions subscale, which measures support for the idea that in certain circumstances (those involving coercion), a person could be forced to confess (Clark et al., 2010).

Juror ability to recognise inconsistencies and adjust their verdicts accordingly, may also vary depending on individual differences in cognitive flexibility. Cognitive flexibility relates to an ability to change mental sets and adapt to varying environmental stimuli (Dennis & Vander Wal, 2010). A specific component of cognitive flexibility, which is of interest in this context, is characterised by the awareness of multiple explanations for human behaviour, and

the ability to produce multiple solutions in response to a problem (Dennis & Vander Wal, 2010). This relates to confession evidence, as recognition of inconsistencies requires jurors to adjust their presumption of guilt, and consider alternative reasons for a confession (Woestehoff & Meissner, 2016). The Cognitive Flexibility Index (CFI) developed by Dennis and Vander Wal (2010) can be utilised to measure this construct, and assess the impact it has on juror sensitivity to inconsistencies.

Understanding the Influence of Cognitive Bias

A key cognitive bias that plays an integral role in jurors' over-estimation of confession evidence, and which underlies a tendency to disregard inconsistencies, is the confirmation bias (Kassin, 2012; Palmer et al., 2016). People are prone to confirmation bias because it reduces ambiguity – individuals are motivated to seek out information which confirm their hypotheses, as this affirms their understanding of the world, and gives meaning to their lives (Klayman & Ha, 1987). There are three main components to the confirmation bias; seeking out information that confirms a belief, ignoring or actively discounting information that contradicts this belief, and interpreting ambiguous evidence as supporting the original belief (Kassin, Reddy & Tulloch, 1990; Nickerson, 1998). In the current context, the presence of a confession, sets into motion a confirmation bias that assumes guilt on the basis that an innocent person would not confess (Kassin et al., 2010; Leo, 2009). This bias means jurors to process all subsequent evidence in line with their guilty hypothesis, using ambiguous evidence to add to this narrative (Kassin, 1997, Kassin, 2012; Nickerson, 1998). Further, the confirming aspect of this bias is so strong, that it typically prevents jurors from considering alternative explanations or exculpatory evidence, often leading them to actively discount or ignore it (Nickerson, 1998). As such, the

confirmation bias fosters automatic processing of confession evidence, aided by heuristics, which limits the extent to of critical analysis of evidence (Kassin, 2012).

Overcoming Confirmation Bias: Hypothesis Disconfirmation

One technique proposed to limit the extent to which people engage in biased processing of information, is hypothesis disconfirmation (Brewer et al., 2002; Koriat, Lichtenstein & Fischhoff, 1980). Hypothesis disconfirmation works to challenge confirmation of existing hypotheses or judgements, by actively encouraging people to consider that initial beliefs might be incorrect, and explore alternative explanations for behaviours or events (Brewer et al., 2002). Research has provided evidence that this method reduces bias and overconfidence in beliefs, across several different domains: predicting individual outcomes (Griffin, Dunning & Ross, 1990), future events (Hoch, 1985), and general knowledge (Koriat et al., 1980). In the context of confession evidence, it is hypothesised that disconfirmation encourages the generation of plausible alternative explanations for a confession, other than guilt, which in turn increases the salience of risk factors, such inconsistencies. This process is proposed to reduce the cognitive biases that reinforce an assumption of guilt, by highlighting a tendency to process information consistent with beliefs, and promoting increased consideration of divergent explanations (Brewer et al., 2002). In doing this, it challenges thinking based on automatic heuristics and encourages a more analytical style of thought (Koriat et al., 1980). Importantly, the aim of this intervention is not to increase general scepticism of confession evidence, but to increase sensitivity to risk factors, such as inconsistencies, and encourage critical evaluation of reliability based on this (O'Donnell & Safer, 2017; Woestehoff & Meissner, 2016).

The Present Research: Summary of Aims and Hypotheses

The aim of the current research is to assess juror sensitivity to inconsistencies in confession evidence, and to test whether this can improved by attenuating confirmation bias, which has a detrimental impact on the juror decision-making process (Kassin, 2012). To implement this, a hypothesis disconfirmation technique will be employed. Although previous research using this technique, found a null effect of hypothesis disconfirmation (Porter, 2016), this is likely due to the generalised approach, and lack of case specificity related to the exercise. As such, we intend to extend this research, by manipulating confession consistency, and adopting a case-specific hypothesis disconfirmation intervention (Brewer et al., 2002). Confession consistency will be manipulated in reference to police facts, across three conditions: consistent, small inconsistent, and large inconsistent. It is possible that jurors' processing of inconsistencies might vary depending on the magnitude of the inconsistency, with evidence showing that jurors process different types of inconsistencies differently (e.g. factual errors are viewed more sceptically than self-contradictions are; Holt & Palmer, 2018). The rationale for varying inconsistency across small and large inconsistencies, is to provide insight into whether the magnitude of errors affects the processing of confession evidence.

For the hypothesis disconfirmation, half the participants in each consistency condition will receive the intervention, while the other half will not (control condition). In addition to this, we will include a seventh condition as a no-confession control group (hypothesis disconfirmation also absent), to assess the impact that confessions have on guilt ratings, compared to the absence of a confession. Given that all conditions require participants to read stimulus materials and attend to details, we built an attention check manipulation into the design. Checking that

participants are paying sufficient attention helps to increase the validity of obtained data (Aust, Diedonhofen, Ullrich & Musch, 2015; Oppenheimer, Meyvis & Davidenko, 2009), and is especially useful as the hypothesis disconfirmation intervention requires active engagement (Kung, Kwok & Brown, 2018). Based on the instructional manipulation check (IMC) developed by Oppenheimer et al. (2009), all participants responded to a 'trap' question which required them to read instructions carefully, in order to answer the question correctly.

There are three main hypotheses relevant to the present study. First, we hypothesise that jurors will be sensitive to inconsistencies in confession evidence, and will adjust their guilt ratings accordingly. If our results support this, we would expect to see a reduction in guilt ratings, when the evidence is inconsistent (with a greater reduction in the large inconsistency condition compared to the small). This pattern of results would support the recent findings of Henderson & Levett (2016), Palmer et al. (2016), and Woestehoff and Meissner (2016), adding weight to the error sensitivity perspective, by suggesting jurors are sufficiently sensitive to inconsistencies, and succumb to cognitive biases to a lesser extent than was previously thought (see Figure 1). Alternatively, if the error insensitivity perspective is supported, we would expect to see high guilt ratings maintained, across all three consistency conditions (Kassin et al., 2010; Kassin & Sukel, 1997; Malloy & Lamb, 2010), highlighting that jurors are indeed poor at recognising inconsistencies, due to various cognitive biases (see Figure 1).

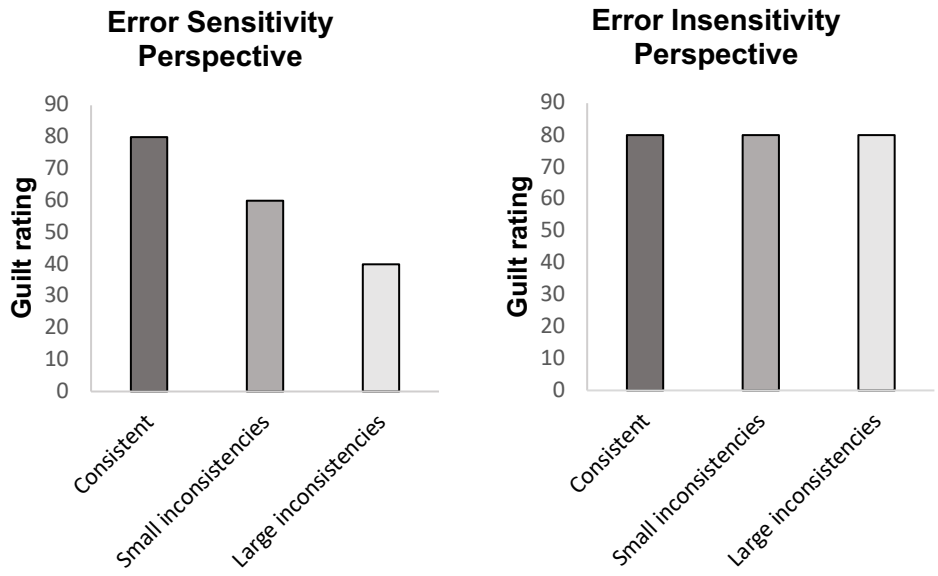

Figure 1. Hypothetical comparison of guilt ratings for each consistency condition, based on error sensitivity and insensitivity perspectives.

Our second hypothesis relates to the effect of the hypothesis disconfirmation and the way we anticipate it will interact with the consistency manipulation. We expect that when the evidence is inconsistent, we will see a reduction in guilt ratings in the disconfirmation condition, compared to the control. This would suggest that the intervention is increasing jurors' sensitivity to inconsistencies, and the extent which this affects their guilt ratings, providing support for the intervention. Concurrent to this, when the evidence is consistent, we would expect guilt ratings to remain similarly high between the disconfirmation condition and the control, highlighting that the intervention is not increasing general scepticism of confession evidence (O'Donnell & Safer, 2017; Woestehoff & Meissner, 2016). If guilt ratings drop in the intervention group, it is likely that that disconfirmation is working to increase scepticism (Palmer et al., 2016; Woestehoff & Meissner, 2016).

Additionally, we hypothesise that plausibility of alternative explanations, as found by Palmer and Holt (manuscript submitted for publication), is the likely mechanism through which hypothesis disconfirmation works to increase recognition of inconsistencies, and affect guilt ratings. As such, we expect that larger inconsistencies will trigger the generation of more plausible alternative explanations for why a suspect confessed, translating to reduced perceptions of guilt. In testing this mediation pathway, we also hypothesise that individual differences in support for coerced confessions/coercive interrogations and cognitive flexibility may moderate the effect of inconsistencies on plausibility.

Finally, we hypothesise that in comparison to the no-confession control, all other conditions, containing confession evidence will have higher guilt ratings; indictive of how compelling confessions are, even if inconsistent.

Method

Participants and design

Three hundred and eighty-nine participants began the study, but 106 were removed due to incomplete responses. The final sample included 283 participants (197 female, 4 other), with an age range of 18-78 years (M = 32.9, SD = 13.55). We did not conduct a formal a-priori power analysis, as the literature does not provide sufficient basis for estimating an effect size for the effect of hypothesis disconfirmation on judgments of guilt. We based our sample size estimates on previous studies examining the effect of inconsistencies on mock-juror judgments of guilt (n = 129; Palmer et al., 2016), and the recommendations outlined by Simmons, Nelson and Simonsohn (2011) of ≥ 20 participants per cell. Based on these, we set our cell minimum to 30, aiming for at least 210 participants. Our sample size

exceeded this. Participants were recruited through Facebook, and from the University of Tasmania (using UTas psychology research participation system and distribution of fliers throughout the Sandy Bay campus). Participation was entirely voluntary, and first year psychology students were awarded 0.5 research credits, while all other participants were offered the opportunity to enter a draw to win a $50 voucher.

Materials

The format of the study was an individualised online survey, developed using LimeSurvey (Version 2.06; Schmitz, 2015). This software ran the survey, randomly allocated participants to conditions, and collected data. Anonymity of responses was ensured as each participant was given a participant ID number, and no identifying details were recorded in the main study.

A single page mock police report (see Appendix C), outlined the case facts of a break-and-enter burglary. This detailed police procedures and findings in response to the incident, including procurement of statements from the residents and neighbours; an inventory of items stolen; collection of evidence from the property (forensic and photographic); compilation of potential suspects; interviewing of charged suspect; obtaining confession statement; and consideration of results from forensic of evidence. For condition 7 (the no-confession control) the police report was varied slightly, in that there was no mention of a confession, it just outlined that the suspect was charged on the basis of the circumstantial evidence (see Appendix D).

There were three versions of the suspect confession statement, each varying in its level of consistency (see Appendix E for all versions). For the consistent condition, details in the confession were entirely consistent with the police report, while for the small and large inconsistency conditions there were a number of errors.

All three confessions were similar in regards to who, where, and how the crime was committed, with inconsistencies pertaining to time of crime, site of entry, items stolen, witness reports of vehicle type, and location to which stolen goods were taken. In comparison to the consistent condition, the small inconsistencies condition contained minor variations in facts (e.g. suspect incorrectly reported stealing pearl earrings instead of a pearl necklace), while the large inconsistencies condition contained major variations (e.g. suspect incorrectly reported stealing a gold watch instead of a pearl necklace).

The hypothesis disconfirmation intervention (see Appendix F) asked people to consider the case information they had just read, and think about what possible reasons there could be for why the suspect (Mr. Wood), might have confessed to the reported crime, even if he had not committed it. Subsequently they were asked to write down the reason they deemed to be most likely in this case, and rate its plausibility on a 10-point scale from 0% (not at all plausible) to 100% (entirely plausible). Participants could not leave alternative reason box blank, but could put "I don't know" in the instance that they could not come up with anything. This stimulus was absent in the controls (conditions: four, five, six, and seven).

Verdict was measured on a guilt rating scale, which varied in 10% increments from 100% innocent to 100% guilty – there was no mid-point so participants were forced to decide which they supported more, out of guilt or innocence. Many previous studies have opted to measure guilt using a dichotomous verdict, and have additionally obtained a continuous measure of confidence in the chosen verdict (Kassin & Wrightsman, 1981). The benefit of recording guilt on a continuous scale is that it combines verdict, and confidence in verdict into a single measure, which allows for greater nuance in interpretation of results.

To ensure that our manipulation of consistency was effective, participants were asked to rate how consistent they thought the confession was, with the police facts of the case on a 10-point scale (0 = not at all consistent, 100 = completely consistent). Participants in the no-confession control did not complete this question.

The ATCC is a validated measure, with internal consistency of $\alpha = .78$ for the coercive interrogation scale, and $\alpha = .73$ for the coerced confessions scale. The subscales are moderately negatively correlated with each other ($r = -.23$, $p < .01$), which is not surprising given that they incongruent attitudes, but this has implications for scoring – subscales must be scored independently. Construct validity of each subscale has been confirmed through comparison with relevant measures, such as the Juror Bias Scale (Kassin & Wrightsman, 1983). Both subscales of the ATCC scale were presented to participants as a single questionnaire, as recommended by Clark et al. (2010). The overall scale included 9 statements in total (4 for coerced interrogations, 5 for coerced confession), and participants were required to select the extent to which they agreed with each statement, on a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree; see Appendix G). Statements indicated support for either coercive interrogation practices (e.g. "police officers should be able to do whatever it takes to get criminal suspects to confess), or for the occurrence of coerced confessions (e.g. "an innocent person could be coerced into confessing to a crime he/she did not commit"). Higher scores on each subscale indicated greater support for each attitude (coercive interrogation range = 4 – 20; coerced confession range = 5 – 25).

The CFI is a validated measure, containing two subscales: the Control subscale (measures inclination to view difficult situations as controllable), and the Alternatives subscale (measures ability to perceive multiple explanations for human

behaviour, and ability to generate multiple, varied solutions to a single problem; Dennis & Vander Wal, 2010). For the current research, only the Alternative subscale was relevant. Psychometrically, the Alternatives subscale has excellent internal consistency ($\alpha = 0.91$), high 7 week test-retest reliability ($r = .75$, $p < .001$), and sufficient evidence for convergent construct validity (compared to the Cognitive Flexibility Scale [Martin & Rubin, 1995]), $r = .62$, $p < .001$, and concurrent criterion validity (Beck Depression Inventory – Second Edition [Beck et al., 1996]), $r = -.20$, $p < .01$. The Alternatives subscale presented to participants contained 13 statements, each requiring a response on a 7-point Likert scale (1 = strongly disagree, 7 = strongly agree; see Appendix H). In response to statements such as, "I like to look at different situation from many different angles", participants were required to consider how much each statement reflected their thinking style. Higher scores indicated higher cognitive flexibility (range = 13 – 91).

A downside to using an online survey format, is that there is no indication of how diligent participants are in their responses (Aust, Diedonhofen, Ullrich & Musch, 2015; Oppenheimer, 2009). To detect inattentive participants, Oppenheimer developed the instructional manipulation check (IMC), which assesses whether or not participants are reading instructions carefully, and responding with the optimal response. This manipulation entails a standard question format, of instructions and response options, however within the instructions, a statement is made that participants should refrain from selecting a response option, instead clicking through to the next page. In our case, the instructional manipulation check consisted of a single question: "Which TV show do you like the most, from the following list?", with five response options. Included in the instructions for this question was the direction: "In order to demonstrate that you have read the instructions, please ignore

the multiple-choice question below, and instead of responding, click 'next' to proceed to the next question" (see Appendix I).

Procedure

Prior to beginning the study, all participants read an information sheet (see Appendix B), and provided their consent by selecting to continue the study. Following a 2 x 3 (+1) between-subjects design, participants were randomly allocated to one of seven conditions. Participants in the three main control conditions read the police report, viewed a variation of the confession, were asked to provide a guilt rating and consistency rating, and then completed both the ATCC and CFI subscales. In the three intervention conditions, the procedure was the same as above, except for the addition of the hypothesis disconfirmation and plausibility rating, after viewing the confession, and prior to rating guilt. For the no-confession control, participants viewed the police report, were asked to provide a guilt rating, and responded the ATCC and CFI scales. Finally, all participants were required to provide demographic details, including age, sex, English fluency and country of residence and were given the opportunity to provide personal details for the draw to win in a new page. Demographic details, including age, sex, English fluency and country of residence were also recorded.

Results

Frequentist approaches to null hypothesis significance testing (NHST) consider how extreme the data are under the null hypothesis (H_0), basing rejection of H_0 on an arbitrary cut off point of $p < .05$ (Jarosz & Wiley, 2014; Quintana & Williams 2018). Focus on assessing whether or not data disproves the null, with a failure to consider the data under the alternative hypothesis, means NHST is biased

against the null, and increases the risk of a type I error (Wagenmaker et al., 2018a). Some scholars say it is not sufficient to preference the alternative hypothesis on the basis that the null exhibits poor predictive ability – rather, there needs to be a comparison of the predictive ability of both H_0 and H_1 (Quintana & Williams, 2018; Wagenmakers et al., 2018a). Bayesian inference solves these problems by quantifying evidence in favour of the null, and the alternative, and comparing the two (Jarosz & Wiley, 2014). As such, we chose to run our analyses using a Bayesian approach, as we felt this comparative framework allowed for greater depth of interpretation. To run our analyses we used JASP software, an open-source statistical package (JASP, 2018). We used default priors based on a Cauchy distribution, where *r* for scale fixed effects = 0.5, *r* for scale random effects = 1, and *r* for scale covariates = 0.354 (JASP, 2018). To aid our interpretation of obtained Bayes Factors, we followed Lee and Wagenmarkers' (2013) classification scheme for strength of evidence in support of either the null or the alternative (see Table 1).

Table 1

Lee and Wagenmakers' interpretation of evidence strength based on obtained Bayes Factors.

Bayes Factor	Evidence Category
> 100	Extreme evidence for H_1
30-100	Very strong evidence for H_1
10-30	Strong evidence for H_1
3 – 10	Moderate evidence for H_1
1 – 3	Anecdotal evidence for H_1
1	No evidence
1/3 – 1	Anecdotal evidence for H_0
1/10 – 1/3	Moderate evidence for H_0
1/30 – 1/10	Strong evidence for H_0
1/100 – 1/30	Very strong evidence for H_0
< 1/100	Extreme evidence for H_0

Data Screening and Manipulation Checks

In screening the data for outliers, participants who had not completed full responses to all survey questions were removed (n = 105). Participants who failed the attention check (n = 70), were also removed from one data set, and the analyses conducted with and without them. Given that there was no difference in the main findings when excluding participants who failed the attention check, all participants were retained in the final data set (n = 284).

To ensure that our manipulation of consistency was effective, we compared ratings of consistency across the three conditions. We ran a Bayesian ANOVA, which highlighted that in the context of our data, the alternative hypothesis was far more likely to be true, compared to the null hypothesis (BF_{10} = 1.628e+28). This indicates extreme evidence in support of differences in consistency ratings between the three consistency conditions. To follow this up, we ran post hoc comparisons, which provided very strong to extreme evidence in support of the alternative hypothesis across all comparisons (see Table 2 for descriptives). That is, it was much more likely that a difference in consistency ratings existed (cf. no difference), between small inconsistencies and the consistent condition (BF_{10} = 91.45); between large inconsistencies and the consistent condition (BF_{10} = 4.014e+28); and between small inconsistencies and large inconsistences (BF_{10} = 4.33e+12). These results provide strong evidence for the effectiveness of our consistency manipulation.

Table 2

Mean Rating of Consistency for each of the Consistency Conditions

Condition	*M*	*SD*	*n*
Consistent	82	15	75
Small Inconsistencies	69.9	24	80
Large Inconsistencies	35.1	27.6	96

Note: Consistency rated as percentage out of 100.

Note: M = mean, SD = standard deviation, n = participants

We checked to see if the data met the assumptions for Analysis of Variance (ANOVA) and Analysis of Covariance (ANCOVA), namely normal distribution,

homogeneity of variance, linearity between the dependent variable and covariates (ANCOVA only), and independence of observations (Field, 2009). Although there were some violations regarding homogeneity and linearity, we did not consider these severe enough to prevent us from running the proposed analyses.

Effect of Consistency of Guilt Ratings: One-way Bayesian ANOVA

To assess whether our results supported the error sensitivity or error insensitivity perspective, we ran a one-way Bayesian ANOVA which looked at the effect of the three consistency conditions on guilt ratings. The analysis revealed that given the data, the alternative hypothesis was much more likely to be true (BF_{10} = 1.465e+6), indicating extreme evidence for variation in guilt ratings across the consistency conditions. Follow up post hoc comparisons, showed minimal support for a difference in guilt ratings between the consistent condition (M = 15.67, SD = 5.3, n = 75) and the small inconsistencies condition (M = 13.7, SD = 6.3, n = 75, BF_{10} = 1.393). There was extreme support for the alternative hypothesis when considering differences between the consistent condition and the large inconsistencies condition (M = 9.98, SD = 6.21, n = 96), and between small inconsistencies and large inconsistencies, where the alternative was far more likely to be true in both cases (BF_{10} = 4.472e+6, BF_{10} = 151.41, respectively). These results suggest that guilt ratings did differ as a function of consistency, providing support for the error sensitivity perspective.

Planned Comparisons: ANCOVAs[1]

We ran a series of planned comparisons to compare the effect of the hypothesis disconfirmation with the control condition, at each level of consistency

[1]Initially we ran an omnibus test, but decided subsequently that we would run planned comparisons. As Rosnow and Rosenthal stipulate (1991), we have a responsibility to run the analyses that best answer our research question. Running planned ANCOVAs allowed us to more accurately answer our research questions and specific hypotheses.

(see Figure 2). If the intervention is effective at prompting jurors to process confession evidence more carefully, without increasing scepticism, we should find that guilt ratings are lower in the intervention group compared to the control, for small and large inconsistencies, but not for the consistent. If the intervention is working to make participants more sceptical of confession evidence (regardless of the quality of the confession), then we would see reduced guilt ratings in the consistency condition as well.

Our first planned comparison looked at the effect of the hypothesis disconfirmation on guilt ratings, when the evidence was consistent. To assess this, we ran a one-way ANCOVA, with ATCC and CFI scores entered as covariates. This was to control for individual differences in testing the effects of the hypothesis disconfirmation. This approach allows for greater sensitivity in testing the intervention effect, as it removes a portion of unexplained variance (the influence of the covariates). The results of the Bayesian ANCOVA revealed that the null hypothesis was 3.61 times more likely to be true compared to the alternative (BF_{01} = 3.61, d = 0.14, 95% CI[-.32, .59]), providing evidence that there was likely no difference in guilt ratings between the hypothesis disconfirmation condition (N = 41, M = 15.34, SD = 4.84) and the control (N = 34, M = 16.06, SD = 5.85). This suggests the null model was the best fit for the data, when the evidence was consistent. Including the ATCC subscales and the CFI scores as covariates only operated to strengthen the evidence for the null (subscale1, BF_{01} = 13.16, subscale2, BF_{01} = 13.58, CFI, BF_{01} = 10.9).

Our next comparison looked at the effect of the hypothesis disconfirmation on guilt ratings when the evidence contained small inconsistencies. In this instance the alternative hypothesis was 2.7 times more likely to be true than the null,

suggesting that guilt ratings did differ as a function of the intervention ($BF_{10} = 2.712$, $d = 0.54$, 95% CI[.09, .98]), as they were lower in the hypothesis disconfirmation condition (n = 37, M = 11.89, SD = 6.37,) than in the control condition (n = 43, M = 15.19, SD = 5.91). However according to Lee and Wagenmakers' classification scheme (2013), this result only provides anecdotal evidence in support of the alternative hypothesis, making the interpretation inconclusive. Controlling for ATCC and CFI scores reduced the amount of evidence in support of the alternative hypothesis (Coerced Interrogation subscale, $BF_{10} = 0.611$, Coerced Confession subscale 2 $BF_{10} = 1.458$, CFI, $BF_{10} = 0.674$), indicating that the best fit for the data, was the model which included only the intervention.

Our final comparison looked at the effect of hypothesis disconfirmation on guilt ratings when there were large inconsistencies. As with the small inconsistencies condition, there was some evidence that guilt ratings were lower in the hypothesis disconfirmation condition (n = 51, M = 8.61, SD = 6.79), than in the control condition (n = 45, M = 11.56, SD = 6.36), as these results were 2.6 times more likely to occur under the alternative hypothesis than under the null ($BF_{10} = 2.603$, $d = 0.5$, 95% CI[.08, .90]). Again however, this evidence would be classified as anecdotal (Lee & Wagenmakers, 2013), indicating that there is not enough evidence to draw strong inferences from the current data set. Interestingly, there was a greater impact of one covariate in this instance, whereby controlling for differences in attitudes towards coerced interrogations yielded an increased Bayes $Factor_{10}$ of 6.914. This suggests that when inconsistencies are large, and Coerced Interrogation scores are controlled for, it is nearly 7 times more likely that the data will support the alternative hypotheses. This provides slightly more evidence in support of there being a difference in guilt ratings between large inconsistencies and the consistent

condition, due the intervention. The evidence in favour of this model, compared to the model containing only the intervention, is roughly a factor of 3 (6.914/2.603 = 2.66).

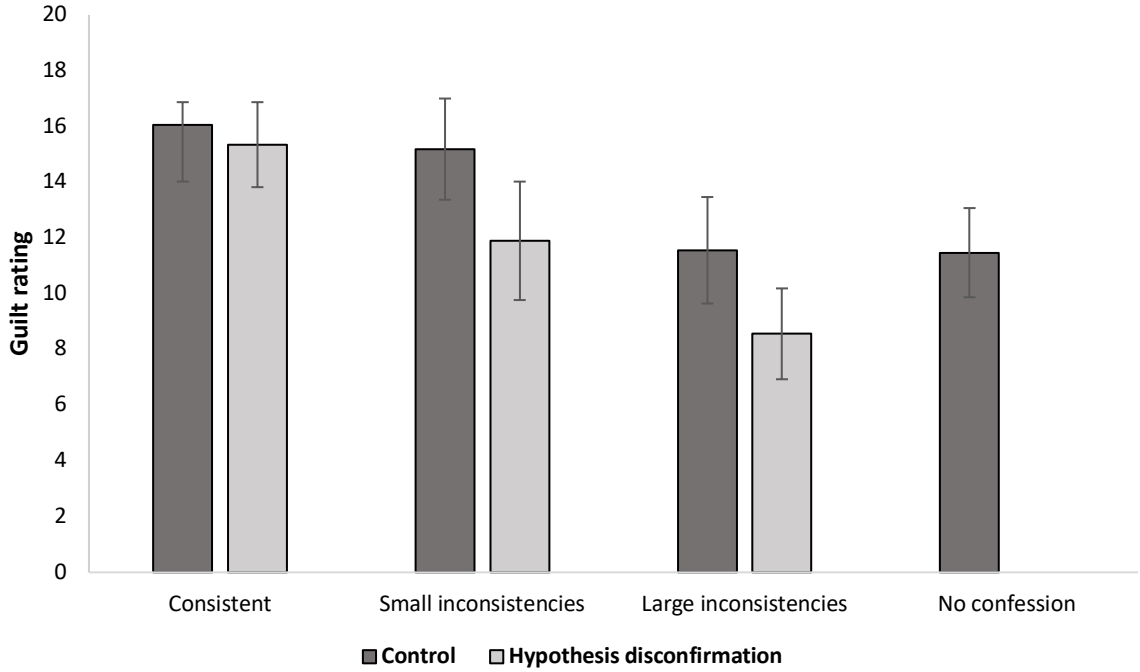

Figure 2. Mean guilt ratings for hypothesis disconfirmation and control conditions across the three consistency conditions (0 = 100% innocent, 20 = 100% guilty). Error bars represent 95% CIs around the mean.

Effects of Sex and Age

Further analysis included testing for sex differences in guilt ratings and an effect of age on guilt ratings. A Bayesian independent-samples t-test analysing sex, revealed that given the data, it was over 3.5 times more likely that the null hypothesis was true, compared to the alternative, suggesting that males (n = 82, M = 13.51, SD = 6.141) and females (n = 197, M12.55, SD = 6.141) did not differ greatly in the guilt ratings they provided (BF_{01} = 3.580). Conducting a Bayesian correlation matrix,

the results provided evidence against a correlation between age and guilt ratings, with the null hypothesis 8 times more likely to be true, given the data ($BF_{01} = 8.103$).

Mediation Analysis

We conducted mediation analyses to test whether plausibility ratings of alternative explanations acted as a mechanism through which inconsistencies in confession evidence affected guilt ratings. Specifically, we wanted to investigate whether the presence of inconsistencies triggers the generation of more plausible alternative explanations, translating to reduced perceptions of guilt. Additionally, we tested a moderated-mediation model, hypothesising that the effect of inconsistencies on the generation of alternative explanations would be stronger for people with high cognitive flexibility, and with supportive attitudes towards coerced confessions. These analyses were conducted using participants from the intervention conditions (n = 129), as plausibility ratings were only relevant to the hypothesis disconfirmation. Using PROCESS software (Hayes, 2013), we ran two mediation analyses; one comparing consistent evidence with small inconsistencies and one comparing consistent with large inconsistencies (see Appendix J for output).

Comparison of the consistent condition with the small inconsistencies condition revealed no mediation effect, as inconsistencies did not affect plausibility ratings $B = -.91$, $p = .864$, 95% CI [-11.43, 9.61], nor did plausibility affect guilt ratings, $B = -3.44$, $p = .674$, 95% CI [-.04, .07]. In this model, only the direct effect of inconsistencies on guilt ratings was significant, $B = -3.44$, $p = .009$, 95% CI [-5.99,-.89]. We included CFI scores as a potential moderating variable between inconsistencies and plausibility, however it did not produce any effect on the model ($B = -.35$, $p = .221$, 95% CI [-.933, .22].

Comparison of the consistent condition with the large inconsistencies condition, revealed partial moderated-mediation (see Figure 3). In this instance, the first leg of the mediation pathway showed a significant effect of inconsistencies on plausibility ratings (B = 5.33, p = .032, 95% CI [.46, 10.21]). This effect was greater for people with high CFI scores (B = .69, p = .016, 95%CI [.13,1.23]), indicating that cognitive flexibility moderated the effect of inconsistencies on plausibility of alternative explanations; bigger inconsistencies led to greater plausibility ratings, and this effect was magnified for people with high cognitive flexibility. Increases in plausibility ratings however, did not translate to an affect on guilt ratings (B = -.03, p = .175, 95% CI [-.08, .01]), meaning the indirect effect was insignificant, although the direct effect of inconsistencies on guilt ratings remained (B = -3.2, p<.001, 95% CI [-4.34, -2.05]).

For both models (consistent vs small) and (consistent vs large), we also ran the Coerced Confessions subscale as a moderator, in the same fashion as the CFI. This however, did not yield a significant result, indicating that attitudes towards coerced confessions did not moderate the relationship between inconsistencies and plausibility, all ts < 1.15, all p values > .25.

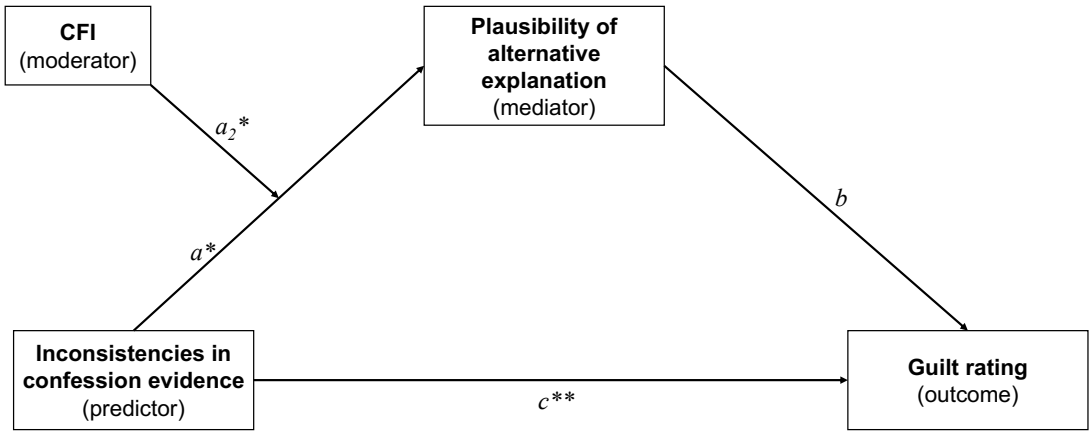

Figure 3. Mediation effect of large inconsistencies on plausibility ratings, moderated by CFI.

* ≤.05, ** ≤.001

Analysis of No-Confession Control Group

To compare the no-confession control group, with the other 6 conditions, we ran a Bayesian ANOVA. The results of this analysis, revealed an overall difference in guilt ratings across the 7 conditions, indicated by greater support for the alternative hypothesis, than the null (BF_{10} = 1.568e+7). The no-confession control group however, did not have significantly lower guilt ratings than all other conditions, as we had expected. Post hoc follow up comparisons showed varying levels of support for the alternative hypothesis in some conditions, and support for the null in others (see Table 3 for descriptives and Bayes Factors). Overall, guilt ratings for the no-confession condition were lower than for conditions involving a consistent confession, and the small inconsistencies control condition.

Table 3

Means and standard deviations for guilt ratings across the seven conditions, n = number of participants per condition.

Condition		*M*	*SD*	*n*	BF_{10}	BF_{01}
7 (+ 1 control)	1 (consistent x HD)	15.34	4.84	41	38.59	-
	2 (small x HD)	11.89	6.37	37	-	3.86
	3 (large x HD)	8.588	5.80	51	2.75	-
	4 (consistent x control)	16.06	5.85	34	43.21	-
	5 (small x control)	15.19	5.91	43	9.98	-
	6 (large x control)	11.56	6.36	45	-	4.21
	7 (+1 control)	11.47	4.44	32	-	-

Note: M = mean, SD = standard deviation, n = participants

Discussion

The current study assessed juror responses to confession evidence, comparing verdicts across varied levels of consistency between the confession and police facts of the case: consistent, small inconsistencies, large inconsistencies. This analysis allowed evaluation of support for two different theoretical perspectives underlying juror processing of confession evidence, the error sensitivity perspective and the error insensitivity perspective. In addition to this, we trialled a hypothesis disconfirmation intervention, with the aim of further increasing juror sensitivity to inconsistencies within confessions. The findings of the study are summarised below.

Our first research question pertained to whether or not jurors were sensitive to inconsistencies in confession evidence. In contrast to anecdotal and case evidence, but consistent with recent research, our hypothesis was that jurors would be sensitive to inconsistencies and able to adjust their guilt ratings accordingly (Palmer et a., 2016; Woestehoff & Meissner, 2016). Our findings supported this hypothesis, as there was evidence that guilt ratings were lower in the large inconsistency condition compared to both the small inconsistency and consistent conditions. There was no difference however, in guilt ratings between the small inconsistent condition and the consistent condition, suggesting jurors have a harder time recognising inconsistencies when they are more subtle. These results support an error sensitivity perspective, suggesting jurors are more proficient in critically appraising confession evidence and adjusting their verdicts in response to inconsistencies, than previously thought (Henderson & Levett, 2016, Palmer et al., 2016; Woestehoff & Meissner, 2016). This contrasts the error insensitivity perspective, which asserts that jurors are oblivious to inconsistencies in confession evidence (Kassin et al., 2010; Kassin & Sukel, 1997; Malloy & Lamb, 2010). It must be acknowledged however, that the error insensitivity perspective still holds merit as it is based largely on real-world cases, which deviate from the crime specified in this study (Woestehoff & Meissner, 2016). In these cases, the types of crimes associated with false confessions are typically violent, including racial and sexual factors (Drizin & Leo, 2004). The ramifications of these factors for juror sensitivity to inconsistencies are discussed later.

Our second research question pertained to whether or not the hypothesis disconfirmation intervention would be an effective method of increasing sensitivity to inconsistencies. We hypothesised that sensitivity as measured by a reduction in

guilt ratings, would only occur when the confession contained inconsistencies, as when the confession was consistent, guilt ratings would remain at similar rate to the control condition. This hypothesis is based on the greater likelihood of suspect guilt in this instance, and the fact that the hypothesis disconfirmation should increase critical analysis of evidence, but not general scepticism (Brewer et al., 2002; Woestehoff & Meissner, 2016). Additionally, we hypothesised that even if our results supported the error sensitivity perspective, the hypothesis disconfirmation intervention would increase this sensitivity further.

Overall, the results offered some support for the notion that the hypothesis disconfirmation prompted jurors to process confession evidence more carefully. Analysis of the consistent condition supported our hypothesis, in that there was no great difference in guilt ratings between the intervention condition and the control. This suggests that hypothesis disconfirmation does not make people more sceptical of confession evidence, rather participants remain confident in guilt when the confession consistent, regardless of the intervention. This is a positive finding as it indicates, that at the very least, the intervention is not making participants unwarrantedly critical, in circumstances in which they should have relative confidence in the reliability of the evidence. The caveat of this however, is that the evidence in favour of this interpretation is not overwhelmingly convincing. With the Bayes Factor only just above 3.5, there is certainly need for further investigation to confirm effect.

Findings from the inconsistent conditions provide some support for the hypothesis disconfirmation, however as with the consistent condition, the evidence is not convincing enough to be conclusive. In both the inconsistent conditions, the results favoured a difference in guilt ratings between the intervention and control

conditions, but they were not clear-cut enough to allow us to interpret the intervention as effective. In the large inconsistencies condition, the evidence in support of a genuine difference increased when controlling for the Coercive Interrogation subscale. This may be because people who exhibit pro-coercion attitudes, are less likely to think that coercion was a valid reason for confessing, and thus the intervention is less effective.

The mediation analysis showed some effect of inconsistencies on plausibility ratings, but only when inconsistencies were large – this effect varied as a function of cognitive flexibility. As hypothesised, those with higher cognitive flexibility were able to generate more plausible alternative explanations. Importantly, in contrast to Holt and Palmer (manuscript submitted for publication), this effect did not translate into a reduction in guilt ratings, highlighting that plausibility of alternative explanations was not the mechanism through which inconsistencies affected guilt ratings. The implies there may be some other mechanism underpinning the effect of inconsistencies on guilt ratings. In considering potential mechanisms, it is possible that inconsistencies prompt jurors to be more suspicious about confession evidence (Fein, McCloskey & Tomlinson, 1997), and hence, a 'need for more evidence', influences juror responses to inconsistencies and the extent to which they are convinced of a suspect's guilt. In the context of mock-juror studies, where available evidence is typically limited (due to constraints on variable manipulation), inconsistencies may operate to increase suspicion of confession reliability, and reduce the extent to which jurors are willing to return a guilty verdict, based on the evidence. As such, inconsistencies may activate a desire for more information, which in turn may push jurors to be more measured in their verdicts. Another viable mechanism relates to perceived voluntariness of the confession (Alceste, Crozier &

Strange, 2018), which may mediate the relationship between inconsistencies and guilt ratings, as inconsistencies prompt jurors to question the circumstances under which the confession was obtained. Recent evidence shows that errors in confessions cause mock-jurors to rate confessions as more likely to have been coerced rather than provided voluntarily (Alceste et al., 2018), which may translate to a reduction in guilty verdicts. As we are uncertain exactly how the hypothesis disconfirmation affects processing of inconsistencies, future research should test these possible mediators.

Analysis of the no confession control did not elucidate a significant difference in guilt ratings between the confession conditions and the no confession control, as we had expected. Given the compelling nature of confessions (Kassin & Sukel, 1997), we hypothesised that the mere presence of a confession, albeit factually inconsistent, would increase guilt ratings compared to no confession. It is not surprising that this effect was not as overwhelming as we had predicted, when considered in the context of increased media attention, which likely improves lay knowledge of false confessions and wrongful convictions. This notion suggests that over time, jurors are becoming better at responding to confession evidence, based on an increased understanding of the relevant risk factors (Henkel et al., 2008; Woestehoff & Meissner, 2016). This has developed through increased exposure to popular media sources such as, *Making a Murderer* (Ricciardi & Demos, 2015), which contain explanations of problematic interrogation procedures and factors that increase the risk of a person falsely confessing (Henkel et al., 2008). Testing this in a future research would be of value, and may be as simple as including a measure of exposure to relevant sources, as a potential moderator.

Limitations

A limitation of the present research relates to the inferential nature of the evidence. Aside from the confession, all additional evidence (contained in the police report) was entirely circumstantial. The shoe print, the blood sample, and the eye witness sighting of a similar car, either do not directly implicate the suspect, or cannot be objectively verified (Heller, 2006). This lack of direct evidence, linking the suspect to the crime, may play into the 'need for more evidence' mechanism outlined above, and subsequently either under or overestimate the effect of the intervention. Research on juror responses to circumstantial versus direct evidence, suggests that jurors are more likely to acquit when the evidence is purely circumstantial (Heller, 2006; Wells, 1992). If jurors in the control condition reduced their guilt ratings based on the circumstantial nature of the evidence, this may have led to underestimation of the true effect of the intervention. Alternatively, if circumstantial evidence also led participants in the intervention condition to reduce their guilt ratings, this may have led to overestimation of effect, which may not be seen in the instance that stronger corroborating evidence presented. Presenting evidence that directly implicates the suspect, in conjunction with a confession, may make belief in guilt more prominent, and in turn render the intervention less effective. However, in this situation the intervention may also acutely affect the confirmation bias, when it is more potent.

A second limitation of our research relates to the ecological validity of the individual mock-juror paradigm employed (Woestehoff & Meissner, 2016). This issue brings into question how well the results from an individualised mock-juror study reflect the reality of the group decision-making which juries participate in (Bornstein, 1999; Diamond, 1997). Jury deliberation is seen as a rationale and logical

exercise, where discussion of information in an objective manner attenuates the biases relevant to individual presumptions and opinions. The influence of social dynamics and group processes however, mean this is rarely the case (Bray & Noble, 1978). As such, although individual mock- juror paradigms have high internal validity (Kapardis, 2014), generalisability is limited as they fail to consider the effect of an array of biases inherent to group processes that occur in a trial context (Bornstein, 1999; Sommer, Horowitz, & Bourgeois, 2001). In reference to the current research, it would be beneficial to test the effectiveness of a hypothesis disconfirmation intervention in combination with group deliberation, and the requirement of a majority verdict. It is possible that the influence of group processes such as conformity, may override the effect of the intervention at the individual level (Ruva & Guenther, 2017). Further, it would be useful to test a group hypothesis disconfirmation intervention, offering jurors the opportunity to generate alternative explanations as a cohort.

Another limitation of the present study relates to the inclusion of information outlining prior offences on behalf of the suspect. There is evidence that knowledge of a prior record can sway jurors towards a guilty verdict, even when the court advises that this information may not be used to infer guilt for the current charge (Blume, 2008; Greene & Dodge, 1995). In our study, multiple participants explicitly mentioned Mr. Wood's previous offence as alternative explanations for confessing. In this sense, knowledge of a prior record may have underestimated both the extent to which jurors are sensitive to inconsistencies, and the effect of the intervention on reducing guilt ratings. If jurors were aware of inconsistencies, or generated plausible alternative explanations, knowledge of Mr. Wood's previous offences may have

overridden these former considerations, resulting in higher guilt ratings and dulling the true effect of the intervention.

Implications

There are two key implications of the present study: First, from a theoretical standpoint, the results align with an error sensitivity perspective of juror processing of confession evidence (Palmer et al., 2016: Woestehoff & Meissner, 2016). That is, rather than ignoring or discounting errors in confession evidence, jurors are able to identify inconsistencies and take them into account. This challenges the error insensitivity perspective and demonstrates that jurors deserve more credit for limiting the impact of confirmation bias, and using recognition of inconsistencies to adjust their guilt ratings. It also indicates that jurors are better at processing confession evidence than anecdotal evidence would have us believe (Kassin, 2012). This however, needs to be considered cautiously, as the ecological validity of these findings are somewhat limited, and may not accurately represent the experience of jurors at trial (Diamond, 1997; Ruva & Guenther, 2017). Although in this instance, jurors were adept at responding appropriately to the presence of inconsistencies, it is possible, as mentioned above that other factors, such as group dynamics may influence the extent of this. It is likely that instances of error sensitivity occur in addition to instances of insensitivity.

Consideration of when error insensitivity is more prevalent, is relevant to the second implication of our study. Our results indicate a promising, but not convincing, suggestion that the hypothesis disconfirmation intervention may be an effective method of increasing juror sensitivity to inconsistencies. Although jurors seem to detect and take into account inconsistencies, they do not necessarily do this to the best of their ability – this finding provides some evidence for the use of

hypothesis disconfirmation in promoting critical appraisal of confessions. To assess this further, it would be useful to trial the intervention in situations where insensitivity to inconsistencies might be more pronounced. Due to ethical requirements, the scenario used in our research outlined a non-violent crime, with no specific victim. In contrast to this, in most real-world false confession cases, the crime type is typically violent (81% of false confession cases involve homicide; Drizin & Leo, 2004), the suspects are overwhelmingly male (93% of false confessors are male), with majority female victims (Drizin & Leo, 2004), and there is often a racial element to the case (Innocence Project, 2017c). It is possible in these instances, where the nature of the crime, and the experience of the victim elicit a strong emotional response, that a presumption of guilt is stronger (Kassin, 2012). In such cases, a hypothesis disconfirmation may be more effective in preventing people from falling prey to cognitive biases associated with automatic heuristic processing. It would be valuable to test the intervention further.

This research project has been valuable in illuminating how inconsistency and disconfirmation may interact. Many varied factors operate in a complex way, in the context of juries, and research that contributes to the breadth of depth of understanding is therefore valuable. It is promising to find that jurors may be more proficient than previously anticipated, and that there are interventions that may increase juror capabilities further, with both areas benefitting from further research and replication.

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Appendices

Appendix A

Ethics approval letter

Dear Dr Palmer

Ethics Ref: H0012662
Title: Juror detection of inconsistencies in witness and confession statements
This email is to confirm that the following amendment was approved by the Chair of the Tasmania Social Sciences Human Research Ethics Committee on 26/7/2018:

- Addition of Honours student investigator Molly Port.
- Revised Information Sheet

All committees operating under the Human Research Ethics Committee (Tasmania) Network are registered and required to comply with the National Statement on Ethical Conduct in Human Research (NHMRC 2007, updated May 2015).

This email constitutes official approval. If your circumstances require a formal letter of amendment approval, please let us know.

Should you have any queries please do not hesitate to contact me.

Kind regards
Katherine

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UNIVERSITY of TASMANIA

CRICOS 00586B

Appendix B

Participant Information Sheet

Thank you for volunteering to participate in this study - data collection has now ended, and this study is no longer available. If you have any questions please contact Molly (molly.port@utas.edu.au)

Juror Perceptions of Case Evidence - Participant Information Sheet

Invitation

We would like to invite you to participate in the study named above.

This study is being conducted in partial fulfillment of an Honours degree for Molly Port under the supervision of Dr Matthew Palmer.

It is best if this study is completed on a laptop. If you are completing it on a phone or tablet, please ensure 'portrait lock' is switched off, and your device is landscape oriented.

What is the purpose of this study?

This study examines how jurors evaluate evidence and factors that influence perceptions of evidence reliability.

Why have I been invited to participate?

You have been invited to participate in this study due to your enrolment in undergraduate Psychology units at the University of Tasmania, or because you are an eligible member of the wider community.

To participate in this study you must be over the age of 18.

While we would greatly appreciate your participation in this study we recognise and respect your right not to take part. Please note that you will not be penalised in any way if you choose not to participate in this study, and any relationship you may have with the University of Tasmania will not be affected.

This Participation Information Sheet will explain what is involved with participating in this research task. Knowing what is involved will help you to decide whether or not you would like to participate in this study, so please read this information carefully.

What will I be asked to do?

If you consent to participating in this research study you will be asked to imagine you are a jury member, and to read a page of case facts related to a non-violent crime. Then, you will be asked to read some evidence regarding the suspect related to this crime. You will then be asked to provide responses to a series of questions about the materials you have read, including providing a verdict response.

This task is expected to take approximately 30 minutes in total to complete.

Are there any possible benefits from participation in this study?

While there may be no direct benefits of this research study to you as a participant, this study does have potential benefits for the wider community. Understanding how potential jurors evaluate evidence can help to develop methods for presenting evidence within a trial that maximise the quality of juror decision making.

Participants who are enrolled in first year psychology units will have the option to redeem 0.5 research participation credits from this study.

If you are not a first year psychology student, or do not wish to redeem research participation credit, you will be eligible to go in the draw to win one of six $50 gift vouchers.

To gain research credit, or to enter the draw to win this gift voucher you will need to provide us with your email address at the completion of the survey. Please note that your email address will be stored in a separate data base to your survey questions, and provision of this information will not make your answers in anyway identifiable.

Are there any possible risks from participation in this study?

We do not believe that there are any foreseeable risks associated with participating in this study.

What if I change my mind during or after the study?

Please be aware that if you choose to participate in this study, you are free to withdraw at any time before submitting the survey. There will be no penalties, and you can withdraw without providing us with an explanation. If you choose to withdraw prior to submitting your survey all information you have provided up until that will be destroyed. Please note that once you have submitted your survey it may not be possible to remove your data due to the anonymous nature of responses.

What will happen to the information when this study is over?

All data related to participation in this study will be stored securely in the Psychology department on the Sandy Bay campus of the University of Tasmania. All files will be stored securely on a password-protected hard drive.

It is recommended that all research data is kept for a minimum of 5 years from the date of first publication. After this time, online surveys will be erased from the hard drive.

With your permission, we will be archiving the data from this study for use in future research studies. By consenting to participate in this study, you are also consenting to your data being archived.

Please note that all data will be de-identified, and all data retained will remain confidential and completely anonymous.

How will the results of the study be published?

The results of this study will be disseminated in Molly's Honours thesis. These results will be finalised by the end of October 2018. If you would like access to a summary of results please contact either myself (Molly) at Molly.Port@utas.edu.au or Dr Matthew Palmer at Matthew.Palmer@utas.edu.au and we will make this available to you as soon as possible.

Please note that all participants will be unidentifiable in the publication of results.

What if I have questions about this study?

If you have any questions about this study, or would like to report any potential risks that may have been overseen during the design phase, please do not hesitate to contact us.

Dr Matthew Palmer

Email: Matthew.Palmer@utas.edu.au

Phone: 6324 3004

Molly Port

Email: Molly.Port@utas.edu.au

This study has been approved by the Tasmanian Social Sciences Human Research Ethics Committee. If you have concerns or complaints about the conduct of this study, please contact the Executive Officer of the HREC (Tasmania) Network on 03 6226 6254 or email human.ethics@utas.edu.au.

The Executive Officer is the person nominated to receive complaints from research participants. Please quote ethics reference number H12662.

Thank you for taking the time to consider participating in this study.

REMINDER: Please note that by consenting to participate in this study, you are also providing consent for your data to be **anonymously** archived for use in future studies.

Appendix C

Police Report (conditions 1-6)

Imagine you are a member of a jury, and are required to consider the case outlined below. Please read the police report carefully, and tick the box before you click next, to confirm you have read it.

Official Police Report

Case number: 193485
Date: 21/04/2016

Location of incident: 14 View Street, Palm Cove

Type of Incident: Break and enter/burglary

Station: Smithfield Police Station, QLD

Reporting officer: Constable L. Denham

Case Facts:

On 16/04/2016 at approximately 1040 hours, a call was received reporting a break and enter burglary at 14 View Street, Palm Cove. A vehicle was immediately dispatched.

Constable Lyn Denham arrived at the scene at 1100 hours and the home owners' statement was promptly taken. The residents allegedly left the house at 0830 hours, before returning just after 1000 hours. They reported they had entered the house through the front door, and became aware of a disruption when they saw that the kitchen window had been smashed. After scanning the house for missing items it was apparent that jewellery, including a pearl necklace and diamond earrings, was missing from the bedroom dresser. A MacBook Pro laptop was missing from the study desk, a Canon E0S 6D DSLR camera was missing from the third shelf of a bookcase located in the left-hand corner of the study, and the sound system had been removed from the TV cabinet in the lounge room.

Constable Denham scanned the property for evidence. Footprints were found on the path to the left hand side of the house leading from the front garden to the backyard. A print was taken and photographic evidence was collected. A small sample of blood was collected from the smashed kitchen window, which was located to the left of the backdoor. No fingerprints were found.

Constable Denham proceeded to question neighbours who were home at the time. It was reported that a white Toyota ute had been sighted parked out the front of number 14, although no suspicious activity was noted during the timeframe in which the alleged burglary occurred.

Based on similarities to other break and enter burglaries in the suburb of Palm Cove in previous weeks, a list of potential suspects was compiled.

On 18/04/2016 the main suspect, Jason Wood, was brought in to the station for questioning. Mr Wood was well known to the Smithfield police force due to being implicated in previous offences of burglary. After interviewing Mr. Wood for a couple of hours, he provided a confession.

A statement was prepared by Constable Denham and signed by the defendant in the presence of both Constable Denham and Constable Linton. All stolen goods were subsequently repossessed, after they were located in a park near Mr. Wood's house.

On 20/04/2016 forensic DNA and impression analysis reports were returned from the laboratory. It appeared that the shoe print matched the size of Mr Wood’s feet, however DNA evidence obtained from the blood sample proved to be inconclusive.

☐ I have read the above police report.

Appendix D

Police Report (no-confession control)

Imagine you are a member of a jury, and are required to consider the case outlined below. Please read the police report carefully, and tick the box before you click next, to confirm you have read it.

Official Police Report

Case number: 193485

Date: 21/04/2016

Location of incident: 14 View Street, Palm Cove

Type of Incident: Break and enter/burglary

Station: Smithfield Police Station, QLD

Reporting officer: Constable L. Denham

Case Facts:

On 16/04/2016 at approximately 1040 hours, a call was received reporting a break and enter burglary at 14 View Street, Palm Cove. A vehicle was immediately dispatched.

Constable Lyn Denham arrived at the scene at 1100 hours and the home owners' statement was promptly taken. The residents allegedly left the house at 0830 hours, before returning just after 1000 hours. They reported they had entered the house through the front door, and became aware of a disruption when they saw that the kitchen window had been smashed. After scanning the house for missing items it was apparent that jewellery, including a pearl necklace and diamond earrings, was missing from the bedroom dresser. A MacBook Pro laptop was missing from the study desk, a Canon E0S 6D DSLR camera was missing from the third shelf of a bookcase located in the left-hand corner of the study, and the sound system had been removed from the TV cabinet in the lounge room.

Constable Denham scanned the property for evidence. Footprints were found on the path to the left hand side of the house leading from the front garden to the backyard. A print was taken and photographic evidence was collected. A small sample of blood was collected from the smashed kitchen window, which was located to the left of the backdoor. No fingerprints were found.

Constable Denham proceeded to question neighbours who were home at the time. It was reported that a white Toyota ute, had been sighted parked out the front of number 14, although no suspicious activity was noted during the timeframe in which the alleged burglary occurred.

Based on similarities to other break and enter burglaries in the suburb of Palm Cove in previous weeks, a list of potential suspects was compiled.

On 18/04/2016 the main suspect, Jason Wood, was brought in to the station for questioning. Mr Wood was well known to the Smithfield police force due to being implicated in previous offences of burglary. After interviewing Mr. Wood for a couple of hours, police charged him with the offence.

On 20/04/2016 forensic DNA and impression analysis reports were returned from the laboratory. It appeared that the shoe print matched the size of Mr Wood's feet, however DNA evidence obtained from the blood sample proved to be inconclusive.

☐ I have read the above police report.

Appendix E

Confession Statements

Consistent Confession

The next piece of evidence you are asked to consider is a confession statement. Please tick the box, to confirm you have read the confession, before clicking next.

Suspect Statement of Admission

Statement provided by: Mr. Jason Wood

Constables in attendance: Constable L. Denham, Constable P. Linton

Date of affidavit: 18/04/2016

I, Jason Wood, of 36 Elizabeth Street, Smithfield, affirm as follows:

I gave this statement at 2:30pm on Monday 18th April, 2016, at Smithfield police station.

At approximately 9:15am on April 16th, I arrived at the residence of 14 View street, Palm Cove. I knocked on the door to see if anyone was home, and walked around the side of the house and entered the backyard.

I smashed the window to the left hand side of the back door and entered the house into the kitchen. I went to the bedroom and took a pearl necklace and some diamond earrings. I then went into the study and took a laptop and charger, as well as a camera. I also took the sound system from the lounge room. I then left through the back door, got in my car, a white Toyota ute, and drove off.

I drove the goods back to Smithfield and hid them near my house, in some bushes in Downton Park.

This statement was signed by the defendent in the presence Constable L. Denham and Constable P. Linton, on the 18th of April, 2016.

☐ I have read the above confession

Small Inconsistencies Confession

The next piece of evidence you are asked to consider is a confession statement. Please tick the box, to confirm you have read the confession, before clicking next.

Suspect Statement of admission:

Statement provided by: Mr. Jason Wood

Constables in attendance: Constable L. Denham, Constable P. Linton

Date of affidavit: 18/04/2016

I, Jason Wood, of 36 Elizabeth Street, Smithfield, affirm as follows:

I gave this statement at 2:30pm on Monday 18th April, 2016, at Smithfield police station.

At approximately 8:00am on April 16th, I arrived at the residence of 14 View street, Palm Cove. I knocked on the door to see if anyone was home, and walked around the side of the house and entered the backyard.

I smashed the window to the right hand side of the back door and entered the house into kitchen. I went to the bedroom and took some pearl earrings, and a diamond ring. I then went into the study and took a laptop, a camera, and also the sound system. I then left through the back door, got in my car, a white Holden ute, and drove off.

I drove the goods back to Smithfield and hid them in a field near my house.

This statement was signed by the defendent in the presence of Constable L. Denham and Constable P. Linton, on the 18th of April, 2016.

☐ I have read the above confession

Large Inconsistencies Confession

The next piece of evidence you are asked to consider is a confession statement. Please tick the box, to confirm you have read the confession, before clicking next.

Suspect Statement of admission

Statement provided by: Mr Jason Wood

Constables in attendance: Constable L. Denham, Constable P. Linton

Date of affidavit: 18/04/2016

I, Jason Wood, of 36 Elizabeth Street, Smithfield, affirm as follows:

I gave this statement at 2:30pm on Monday 18th April, 2016, at Smithfield police station.

At approximately 1:00pm on April 16th, I arrived at the residence of 14 View St, Palm Cove. I knocked on the door to see if anyone was home, and walked around the side of the house. I smashed the window at the side of the house and entered into the living room.

I went to the bathroom and took some jewellery, including some diamond ear-rings and a gold watch. I then went to the study and took an ipad . I also took the TV and games console from the living room. I then left through the back door and got in my car, a silver van, and drove off.

I drove the goods back to Smithfield and hid them in a friend's shed, out the back of his house.

This statement was signed by the defendent in the presence of Constable L. Denham and Constable P. Linton, on the 18th of April, 2016.

☐ I have read the above confession

Appendix F

Hypothesis Disconfirmation Intervention

Consider the case you just read about: can you think of any reasons why Mr. Wood might have confessed, even if he did not commit the crime?

Please select the most likely reason you can think of, for Mr. Wood confessing without having committed the crime, and write it in the space below.

How plausible do you think it is that the defendant in this case confessed because of the reason you provided earlier: ?

Please provide a rating of plausibility on the scale below [0% = not at all plausible, 100% = completely plausible]:

0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
○	○	○	○	○	○	○	○	○	○	○

Appendix G

Attitudes Towards Coerced Confessions Scale

Please respond to the following statements based on the extent to which you agree or disagree with each:

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Police officers should be allowed to do whatever it takes to get criminal suspects to confess.	○	○	○	○	○
Police officers should try to make interrogations uncomfortable for criminal suspects.	○	○	○	○	○
It is OK for a police officer to lie to a suspect during an interrogation because a truly innocent person would not be influenced by the officer's lie.	○	○	○	○	○
An innocent person could be pressured by the police into confessing to a crime he/she did not commit.	○	○	○	○	○
Police officers should try to make interrogations stressful for suspects.	○	○	○	○	○
I can see how people might confess to crimes they did not commit, if it saved them from being charged with much more serious crimes.	○	○	○	○	○
I can see how people might confess to crimes they did not commit if they were threatened by the police.	○	○	○	○	○
I can see how people might decide to confess to crimes they did not commit if a great deal of other evidence suggested they were guilty.	○	○	○	○	○
Sometimes, people will confess to anything in order to stop a stressful interrogation.	○	○	○	○	○

Appendix H

Cognitive Flexibility Inventory – Alternatives Subscale

Please consider how much the following statements relate to you, and respond with whether you agree or disagree that they reflect your thinking style:

	Strongly disagree	Disagree	Somewhat disagree	Neutral	Somewhat agree	Agree	Strongly agree
I am good at "sizing up" situations.	○	○	○	○	○	○	○
I consider multiple options before making a decision.	○	○	○	○	○	○	○
I like to look at difficult situations from many different angles.	○	○	○	○	○	○	○
I seek additional information not immediately available before attributing causes to behaviour.	○	○	○	○	○	○	○
I try to think about things from another person's point of view.	○	○	○	○	○	○	○
I am good at putting myself in others' shoes.	○	○	○	○	○	○	○
It is important to look at difficult situations from many angles.	○	○	○	○	○	○	○
When in difficult situations, I consider multiple options before deciding how to behave.	○	○	○	○	○	○	○
I often look at a situation from different viewpoints.	○	○	○	○	○	○	○
I consider all the available facts and information when attributing causes to behaviour.	○	○	○	○	○	○	○
When I encounter difficult situations, I stop and try to think of several ways to resolve it.	○	○	○	○	○	○	○
I can think of more than one way to resolve a difficult situation I'm confronted with.	○	○	○	○	○	○	○
I consider multiple options before responding to difficult situations.	○	○	○	○	○	○	○

Appendix I

Instructional Manipulation Check

In order to facilitate our research on the decision-making processes of jury members, we are interested to know about different types of decision makers. Some of our manipulations require thorough consideration, and as such, we are interested to know if appropriate time is takent to read instructions carefully. In order to demonstrate that you have read the instructions, please ignore the multiple choice question below, and instead of responding, click next to proceed to the next question.

Which TV show do you like most, from the following list?

- ☐ Game of Thrones
- ☐ Breaking Bad
- ☐ Riverdale
- ☐ The Inbetweeners
- ☐ Law & Order

Appendix J

Mediation and Moderation Analysis Output

CFI as Moderator

dNotes: These analyses include only Ps in the disconfirmation conditions

CONSISTENT VS LARGE INCONSISTENCIES

Run MATRIX procedure:

```
*************** PROCESS Procedure for SPSS Release 2.041 ***************

      Written by Andrew F. Hayes, Ph.D.   http://www.afhayes.com

**************************************************************************
******
Model = 7
   Y = Guiltrat
   X = Consiste
   M = plausibi
   W = CFITotal

Sample size
       92

**************************************************************************
******
Outcome: plausibi

Model Summary
        R       R-sq        F       df1       df2         p
    .3328     .1107    3.6531    3.0000   88.0000     .0156

Model
            coeff        se         t         p      LLCI      ULCI
constant   52.4016    2.4365   21.5068    .0000   47.5595   57.2436
Consiste    5.3282    2.4514    2.1735    .0324    .4564   10.1999
CFITotal     .0529     .2770     .1912    .8488   -.4975     .6033
int_1        .6820     .2775    2.4580    .0159    .1306    1.2335

Interactions:

 int_1    Consiste    X     CFITotal

**************************************************************************
******
Outcome: Guiltrat
```

Model Summary

R	R-sq	F	df1	df2	p
.5466	.2988	18.9644	2.0000	89.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	13.2796	1.3526	9.8179	.0000	10.5920	15.9672
plausibi	-.0324	.0238	-1.3654	.1756	-.0796	.0148
Consiste	-3.2012	.5767	-5.5505	.0000	-4.3472	-2.0553

********** DIRECT AND INDIRECT EFFECTS **********

Direct effect of X on Y

Effect	SE	t	p	LLCI	ULCI
-3.2012	.5767	-5.5505	.0000	-4.3472	-2.0553

Conditional indirect effect(s) of X on Y at values of the moderator(s)

Mediator

	CFITotal	Effect	Boot SE	BootLLCI	BootULCI
plausibi	-8.8519	.0230	.1887	-.2629	.5844
plausibi	.0000	-.1728	.1890	-.7095	.0749
plausibi	8.8519	-.3687	.3417	-1.2618	.1468

Values for quantitative moderators are the mean and plus/minus one SD from mean.
Values for dichotomous moderators are the two values of the moderator.

********** ANALYSIS NOTES AND WARNINGS **********

Number of bootstrap samples for bias corrected bootstrap confidence intervals:
1000

Level of confidence for all confidence intervals in output:
95.00

NOTE: The following variables were mean centered prior to analysis:
Consiste CFITotal

NOTE: Some cases were deleted due to missing data. The number of such cases was:
79

------ END MATRIX -----

CONSISTENT VS SMALL INCONSISTENCIES

Run MATRIX procedure:

```
*************** PROCESS Procedure for SPSS Release 2.041 ***************

      Written by Andrew F. Hayes, Ph.D.   http://www.afhayes.com

**************************************************************************
******
Model = 7
   Y = Guiltrat
   X = Consiste
   M = plausibi
   W = CFITotal

Sample size
        78

**************************************************************************
******
Outcome: plausibi

Model Summary
         R       R-sq        F       df1       df2         p
     .1985     .0394     1.0113    3.0000   74.0000     .3927

Model
             coeff         se         t         p       LLCI       ULCI
constant   45.3398     2.6358    17.2012     .0000   40.0877    50.5918
Consiste    -.9100     5.2786     -.1724     .8636  -11.4279     9.6079
CFITotal    -.3570     .2893    -1.2344     .2210    -.9334     .2193
int_1        .7298     .5781     1.2624     .2108    -.4221     1.8817

Interactions:

 int_1    Consiste    X     CFITotal

**************************************************************************
******
Outcome: Guiltrat

Model Summary
         R       R-sq        F       df1       df2         p
     .3004     .0902     3.7189    2.0000   75.0000     .0288

Model
```

```
            coeff        se         t         p       LLCI       ULCI
constant   13.1748    1.4081    9.3564     .0000   10.3697   15.9799
plausibi     .0117     .0276     .4227     .6737    -.0434     .0668
Consiste   -3.4380    1.2806   -2.6846     .0089   -5.9892    -.8869

****************** DIRECT AND INDIRECT EFFECTS
************************

Direct effect of X on Y
    Effect        SE         t         p       LLCI       ULCI
   -3.4380    1.2806   -2.6846     .0089   -5.9892    -.8869

Conditional indirect effect(s) of X on Y at values of the moderator(s)

Mediator
         CFITotal     Effect    Boot SE   BootLLCI   BootULCI
plausibi   -9.1787    -.0889     .3372    -1.3006     .2994
plausibi     .0000    -.0106     .1773     -.4490     .3122
plausibi    9.1787     .0676     .3124     -.2603    1.2470

Values for quantitative moderators are the mean and plus/minus one SD from mean.
Values for dichotomous moderators are the two values of the moderator.

****************** ANALYSIS NOTES AND WARNINGS
************************

Number of bootstrap samples for bias corrected bootstrap confidence intervals:
    1000

Level of confidence for all confidence intervals in output:
   95.00

NOTE: The following variables were mean centered prior to analysis:
 Consiste CFITotal

NOTE: Some cases were deleted due to missing data.  The number of such cases
was:
  77

------ END MATRIX -----
```

Coerced Confessions Subscale as Moderator

```
Control vs small inconsistencies
Model = 7
   Y = Guiltrat
   X = Consiste
   M = plausibi
   W = ATCC_Coe
```

Sample size
78

****
Outcome: plausibi

Model Summary
R R-sq F df1 df2 p
.1523 .0232 .5858 3.0000 74.0000 .6262

Model
coeff se t p LLCI ULCI
constant 45.2390 2.6652 16.9741 .0000 39.9285 50.5495
Consiste -.6013 5.3376 -.1127 .9106 -11.2369 10.0342
ATCC_Coe -1.0501 1.0016 -1.0484 .2979 -3.0458 .9457
int_1 1.4691 2.0116 .7303 .4675 -2.5390 5.4772

Interactions:

int_1 Consiste X ATCC_Coe

****
Outcome: Guiltrat

Model Summary
R R-sq F df1 df2 p
.3004 .0902 3.7189 2.0000 75.0000 .0288

Model
coeff se t p LLCI ULCI
constant 13.1748 1.4081 9.3564 .0000 10.3697 15.9799
plausibi .0117 .0276 .4227 .6737 -.0434 .0668
Consiste -3.4380 1.2806 -2.6846 .0089 -5.9892 -.8869

********** DIRECT AND INDIRECT EFFECTS **********

Direct effect of X on Y
Effect SE t p LLCI ULCI
-3.4380 1.2806 -2.6846 .0089 -5.9892 -.8869

Conditional indirect effect(s) of X on Y at values of the moderator(s)

Mediator
ATCC_Coe Effect Boot SE BootLLCI BootULCI
plausibi -2.6822 -.0531 .2541 -.8905 .2515
plausibi .0000 -.0070 .1617 -.4041 .3175

```
plausibi     2.6822      .0390      .2330     -.2667      .8589

Values for quantitative moderators are the mean and plus/minus one SD from mean.
Values for dichotomous moderators are the two values of the moderator.

Control vs large inconsistencies
Model = 7
    Y = Guiltrat
    X = Consiste
    M = plausibi
    W = ATCC_Coe

Sample size
        92

**************************************************************************
******
Outcome: plausibi

Model Summary
          R       R-sq        F        df1        df2          p
      .3111      .0968     3.1443     3.0000    88.0000      .0291

Model
             coeff         se          t          p       LLCI       ULCI
constant    51.8257     2.4506    21.1480      .0000    46.9556    56.6958
Consiste     5.0566     2.4655     2.0509      .0433      .1568     9.9563
ATCC_Coe    -1.8783      .8798    -2.1349      .0355    -3.6266     -.1299
int_1        -.1184      .8884     -.1333      .8943    -1.8839     1.6471

Interactions:

 int_1    Consiste    X     ATCC_Coe

**************************************************************************
******
Outcome: Guiltrat

Model Summary
          R       R-sq        F        df1        df2          p
      .5466      .2988    18.9644     2.0000    89.0000      .0000

Model
             coeff         se          t          p       LLCI       ULCI
constant    13.2796     1.3526     9.8179      .0000    10.5920    15.9672
plausibi    -.0324      .0238    -1.3654      .1756     -.0796      .0148
Consiste    -3.2012      .5767    -5.5505      .0000    -4.3472    -2.0553

******************** DIRECT AND INDIRECT EFFECTS
************************
```

Direct effect of X on Y

Effect	SE	t	p	LLCI	ULCI
-3.2012	.5767	-5.5505	.0000	-4.3472	-2.0553

Conditional indirect effect(s) of X on Y at values of the moderator(s)

Mediator

	ATCC_Coe	Effect	Boot SE	BootLLCI	BootULCI
plausibi	-2.8024	-.1748	.2425	-.9601	.0963
plausibi	.0000	-.1640	.1857	-.7010	.0767
plausibi	2.8024	-.1533	.1961	-.8284	.0935

Values for quantitative moderators are the mean and plus/minus one SD from mean.
Values for dichotomous moderators are the two values of the moderator.